THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of — Atty. Docket

KARL J. WOOD ET AL. — PHB 34,169A

Serial No.: 09/118,572 — Group Art Unit: 2672

Filed: JULY 17, 1998 — Examiner: R. YANG

Title: GRAPHIC IMAGE TEXTURE GENERATION

Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed is an original plus two copies of an Appeal Brief in the above-identified patent application.

Please charge the fee of $310.00 to Deposit Account No. 14-1270.

Respectfully submitted,

By _____
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CERTIFICATE OF MAILING

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On June 4, 2002

By _____

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APPEAL BRIEF

Sir:

The rejection of Claims 1-11 is being appealed, which are reproduced in the attached Appendix.

1. Real Party in Interest

The real party in interest is U. S. Philips Corporation, the assignee herein.

2. Related Appeals and Interferences

The Appellant is not aware of any appeals or interferences that relate to the present application.

3. Status of all Claims

Claims 1-11 were submitted in the original application when filed. Claims 1-11 were finally rejected in the Office Action

4. Status of Amendment

No Amendments were filed subsequent to the Final Rejection of November 27, 2001.

5. Summary of the Invention

The present invention is directed to an aapparatus for texture mapping in a computer graphics system using a predetermined set of standardized textures. As can be seen from Figure 1, the apparatus having an input to receive via a network 12 identifying data identifying one of the set of standardized textures and means for processing the data 34 to generate output texels of the identified texture, as described on pages 6-7

As further, described on page 7, each texture of the standardized set is a procedural texture. As described on page 8, the identifying data comprises one or a sequence of program commands, the execution of which will result in the generation of a respective procedural texture. As described on page 7, the means for processing data 34 comprising a processor operable to implement all such input program commands or sequences of input program commands as required to generate the procedural textures of the standardized set.

6. Issues Presented for Review

The first issue on review is whether Claims 1-4, 7 and 9-10 under 35 USC 103(a) are unpatentable over Kamen et al. (U.S. Patent No. 5,812,141) in view of Jenkins (U.S. Patent No. 6,111,582). The second issue on review is whether Claims 5-6 and 8 under 35 USC 103(a) are unpatentable over Kamen et al. in view of Jenkins, and in further view of Griffin et al. (U.S. Patent No. 5,880,737). The third issue on review is whether Claim 11 under 35 USC 103(a) is unpatentable over Kamen et al. in view of Jenkins, and in further view of Tremblay et al. (U.S. Patent No. 5,925,123).

7. Grouping of the Claims

The Appellant respectfully submits that Claims 1-11 either stand or fall together.

8. Arguments

Claims 1-4, 7 and 9-10 stand finally rejected under 35 USC 103(a) as being unpatentable over Kamen et al. (U.S. Patent No. 5,812,141) in view of Jenkins (U.S. Patent No. 6,111,582). Claims 5-6 and 8 stand finally rejected under 35 USC 103(a) as being unpatentable over Kamen et al. in view of Jenkins, and in further view of Griffin et al. (U.S. Patent No. 5,880,737). Claim 11 stands finally rejected under 35 USC 103(a) as being unpatentable over Kamen et al. in view of Jenkins, and in further view of Tremblay et al. (U.S. Patent No. 5,925,123).

In order to make a proper obvious rejection under 35 U.S.C. 103, MPEP Section 706.02(j) requires that the prior art reference (or references when combined) must teach or suggest all of the claim limitations. Further, either the references must expressly or impliedly suggest the claimed invention. Ex parte Clap, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)

In view of the above, it is respectfully submitted that the combination of Kamen et al. in view of Jenkins neither teaches nor suggests all of the claim limitations. In particular, such features include "an input to receive via a network identifying data identifying one of the set of standardized textures", as recited in Claim 1.

In initially addressing this feature in the above rejection, column 2, lines 32-39, of Kamen et al. was being relied on. However, in column 2, lines 32-39, Kamen et al. discloses:

"In some computer graphics system, the texture values themselves are not contained in a pre-stored table...but rater are calculated or derived from a mathematical function which is used to model the associated texture values."

Based on the above disclosure, it is evident that the mathematical function used to model the associated texture values of Kamen et al. is not received via a network, as required by the claims. Further, it is evident that the mathematical function used to model the associated texture values of Kamen et al. is also not one or a sequence of program commands, as further required by the

claims. Therefore, it is respectfully submitted that the presently recited "input to receive via a network identifying data identifying one of the set of standardized textures" is distinguishable over Kamen et al. in view of Jenkins.

Despite the above argument, the above rejections were still maintained. In maintaining the above rejections, the Examiner then appeared to rely on the control signal disclosed in column 6, line 24, of Kamen et al. in order to address the presently recited "input to receive via a network identifying data identifying one of the set of standardized textures".

However, in column 6, lines 22-27, Kamen et al. discloses that the Adapative Texture Mapping Controller 90 would determine the desired interpolation methods based upon the control signals received. Based on this, it is evident that the control signals of Kamen et al. do not meet the presently recited "identifying one of the set of standardized textures", as required by the claims. Therefore, it is respectfully submitted that this feature is still distinguishable over Kamen et al. in view Jenkins.

The above-described deficiencies of Kamen et al. in view of Jenkins were also not addressed by either Griffin et al. or Tremblay et al. since these references are being relied on for other features. Thus, it is respectfully submitted that the invention of Claims 1-11 is not obvious over Kamen et al. in view of Jenkins alone or in combination with either Griffin et al. or Trembley et al. Therefore, the Appellant respectfully requests

that the final rejection of these claims be reconsidered and reversed.

Please charge the fee of $310.00 to Deposit Account No. 14-1270.

Respectfully submitted,

By _____
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A P P E N D I X

1. Apparatus for texture mapping in a computer graphics system, using a predetermined set of standardized textures, the apparatus having an input to receive via a network identifying data identifying one of the set of standardized textures, and means for processing the data to generate output texels of the identified texture, wherein each texture of the standardized set is a procedural texture, the identifying data comprises one or a sequence of program commands, the execution of which will result in the generation of a respective procedural texture, with the means for processing data comprising a processor operable to implement all such input program commands or sequences of input program commands as required to generate the procedural textures of the standardized set.

2. Apparatus as claimed in Claim 1, having at least one further input for one or more predetermined classes of numerical parameter, with the processor being arranged to generate procedural textures with reference to the or each numerical parameter value received.

3. Apparatus as claimed in Claim 1, having at least one further input for a scale factor, with the processor being arranged to generate a procedural texture at a resolution determined by a received scale factor.

4. Apparatus as claimed in Claim 1, wherein the processor is operable to implement only such input program commands or sequences of input program commands as required to generate those procedural textures of the standardized set.

5. Apparatus as claimed in Claim 1, further comprising a cache memory coupled with the processor, with the processor being configured to generate said procedural textures as texture maps within said cache.

6. Apparatus as claimed in Claim 5, further comprising an input to receive a scale factor, and an interpolator to generate output texels from texture map entries in the cache at a resolution determined by the received scale factor.

7. A semiconductor chip comprising a texture mapping apparatus as claimed in Claim 4 on a single substrate.

8. A semiconductor chip comprising a texture mapping apparatus as claimed in Claim 6, with the processor, cache and interpolator on a common substrate.

9. A computer graphics system including an apparatus as claimed in Claim 1, together with a source of three-dimensional polygon data, a geometry processor coupled to receive said polygon data and arranged to generate a two-dimensional representation of said polygons, a source of program commands coupled to the input of the texture mapping apparatus and specifying textures to be applied to respective ones of said polygons, and rendering means coupled to receive the outputs of the geometry processor and texture mapping apparatus and arranged to generate an output image of said polygons with texture applied.

10. A computer graphics system as claimed in Claim 9, wherein the sources of polygon data and program commands comprise an interface to a data network to which are coupled remote sources of such polygon data

and program commands, the interface being coupled with a memory holding a store of network addresses for such remote sources and being operable to format and transmit messages to such addresses calling for the polygon data and program commands.

11. A computer graphics system as claimed in Claim 10, wherein said program commands are transmitted over the network in virtual machine code and the system further comprises means for conversion of the program commands to a local machine code supported by the processor.